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ABSTRACT

An electrolytic cell for the electrowinning of aluminium from alumina dissolved in a halide-containing molten electrolyte, has a cathode cell bottom made of a series of carbon cathode blocks (10) connected side-by-side by glue or ramming paste, each one provided with steel or other conductive bars (11) for the delivery of current and a series of anodes (15) facing the cathode cell bottom. The tops of the carbon blocks (10) forming the cathode cell bottom are shaped in such a way as to provide in the cell bottom a series of parallel channels (25) or grooves preferably coated with an aluminium-wettable refractory coating (35) covered in use by a pool (40) of molten aluminium or a layer of molten aluminium forming a drained surface. Movement of the aluminium pool (40) is decreased, cell operation improved and cell life extended.